Amendments to the Claims

1. (Currently amended) A light-emitting diode characterized by comprising:

an electron injecting electrode, that is, an n-electrode;

a hole injecting electrode, that is, a p-electrode; and

an inorganic light-emitting layer, wherein the inorganic light-emitting layer (1) is formed of an ~~ambipolar~~ inorganic semiconductor material having an ambipolar property in which the ratio of respective mobilities of electrons and holes is in a range of 1/10 to 10, (2) is disposed between the n-electrode and the p-electrode so as to respectively contact the n-electrode and the p-electrode in a non-barrier junction manner such that the ~~ambipolar~~ inorganic semiconductor material conducts both electrons injected from the n-electrode and holes injected from the p-electrode, and (3) has a thickness in a range of [[10]] 100 nm or more and 10 μm or less,

wherein the inorganic light-emitting layer emits light resulting from electrons injected from the n-electrode and holes injected from the p-electrode recombining between the two electrodes, and

wherein the ~~ambipolar~~ inorganic semiconductor material having the ambipolar property is selected from the group consisting of (a) a group II-VI compound and (b) Zn and at least one element selected from the group consisting of S, Se and Te.

2. (Previously presented) The light-emitting diode according to claim 1, characterized in that

the inorganic light-emitting layer consists of a semiconducting material having a dopant concentration of 0.1% or less in atomic ratio.

3. (Canceled)

4. (Currently amended) The light-emitting diode according to claims 1 or 2, characterized in that

the n-electrode includes a layer comprising ~~an n-type inorganic semiconductor material comprising~~ an n-type dopant and the ~~ambipolar~~ inorganic semiconductor material having the ambipolar property.

5. (Currently amended) The light-emitting diode according to claims 1 or 2, characterized in that

the p-electrode includes a layer comprising ~~a p-type inorganic semiconductor material comprising~~ a p-type dopant and the ~~ambipolar~~ inorganic semiconductor material having the ambipolar property.

6. (Currently amended) The light-emitting diode according to claims 1 or 2, characterized in that

the n-electrode includes a first layer comprising ~~an n-type inorganic semiconductor material~~ comprising an n-type dopant and the ~~ambipolar~~ inorganic semiconductor material having the ambipolar property, and the p-electrode includes a second layer comprising ~~a p-type inorganic semiconductor material comprising~~ a p-type dopant and the ~~ambipolar~~ inorganic semiconductor material having the ambipolar property

7. (Previously presented) The light-emitting diode according to claims 1 or 2, characterized in that

a material of a portion contacting the light-emitting layer in at least one of the n-electrode and the p-electrode is formed by use of a material substantially different from the material of the light-emitting layer.

8. (Currently amended) The light-emitting diode according to claims 1 or 2, characterized in that

the ~~ambipolar~~ inorganic semiconductor material having the ambipolar property is formed on a crystalline substrate or a glass substrate, and the n-electrode and the p-electrode are formed on opposing sides of the ~~ambipolar~~ inorganic semiconductor material having the ambipolar property, wherein the n-electrode and the p-electrode do not contact each other.

9. (Currently amended) The light-emitting diode according to claims 1 or 2, characterized in that

a first one of the n-electrode and the p-electrode is formed on a crystalline substrate or a glass substrate, and the ~~ambipolar~~ inorganic semiconductor material having the ambipolar property is stacked thereon, and a second one of the p-electrode and the n-electrode is stacked thereon.

10 -- 11. (Canceled)

12. (Previously presented) The light emitting diode according to claim 1, wherein only one such light-emitting layer is formed between the p-electrode and the n-electrode.

13. (Currently amended) A light-emitting diode, comprising:

an electron injecting n-electrode;

a hole injecting p-electrode;

an ambipolar light-emitting layer (1) continuously extending from the n-electrode to the p-electrode, (2) consisting of an ambipolar semiconducting material which conducts both electrons injected by the n-electrode and holes injected by the p-electrode, (3) having a thickness in a range of equal to or greater than [[10]] 100 nm and no more than ~~100 nm~~ 10 μm, and (4) comprising a first ~~ambipolar~~ semiconductor material selected form the group consisting of (a) a group II-VI compound and (b) Zn and at least one element selected from the group consisting of S, Se and Te.

14. (Currently amended) The light-emitting diode of claim 13, wherein the ambipolar light-emitting layer consists of the first ~~ambipolar~~ semiconductor material.

15. (Currently amended) The light-emitting diode of claim 13, wherein the first ~~ambipolar~~ semiconductor material is Zn and at least one element selected from the group consisting of S, Se and Te.

16. (Previously presented) The light-emitting diode of claim 13, wherein the ambipolar light-emitting layer includes no quantum well and associated barriers.

17. (Currently amended) The light-emitting diode according to claim 1, wherein the light-emitting layer consists essentially of the ~~ambipolar~~ inorganic semiconductor material having the ambipolar property.

18. (Currently amended) A light-emitting diode characterized by comprising:

an electron injecting electrode, that is, an n-electrode;

a hole injecting electrode, that is, a p-electrode; and

an inorganic light-emitting layer, wherein the light-emitting layer is disposed between the n-electrode and the p-electrode so as to respectively contact the n-electrode and the p-electrode and is formed of an ~~ambipolar~~ inorganic semiconductor material having an ambipolar property in which the ratio of respective mobilities of electrons and holes is in a range of 1/10 to 10, and has a thickness in a range of [[10]] 100 nm or more and 10 μm or less,

wherein the inorganic light-emitting layer emits light resulting from electrons injected from the n-electrode and holes injected from the p-electrode recombining between the two electrodes,

wherein the ~~ambipolar~~ inorganic semiconductor material having the ambipolar property is selected from the group consisting of (a) a group II-VI compound and (b) Zn and at least one element selected from the group consisting of S, Se and Te,

wherein the n-electrode has a work function lower than a conduction band edge energy of the ~~ambipolar~~ inorganic semiconductor material having the ambipolar property, and

wherein the p-electrode has a work function higher than ~~the conduction~~ a valence band edge energy of the ~~ambipolar~~ inorganic semiconductor material having the ambipolar property.

19. (New) The light-emitting diode of claim 18, wherein the inorganic light-emitting layer contacts the n-electrode without forming a barrier therebetween and the inorganic light-emitting layer contacts the p-electrode without forming a barrier therebetween.

20. (New) The light-emitting diode of claim 18, wherein the n-electrode comprises Ga-doped ZnO and the p-electrode comprises $CuFeS_2$.

22. (New) The light-emitting diode of claim 1, wherein the inorganic light-emitting layer contacts the n-electrode without forming a barrier therebetween and the inorganic light-emitting layer contacts the p-electrode without forming a barrier therebetween.

23. (New) The light-emitting diode of claim 1, wherein the n-electrode comprises Ga-doped ZnO and the p-electrode comprises $CuFeS_2$.